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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,276	08/05/2003	Andreas Fath	071308.0463	7127
31625	7590	11/13/2007		
BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039			EXAMINER KIM, CHRISTOPHER S	
			ART UNIT 3752	PAPER NUMBER
			MAIL DATE 11/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/634,276

Applicant(s)

FATH ET AL.

Examiner

Christopher S. Kim

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 20, 2007 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claims 1, 3, 6, 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "tightly" in claim 1 is a relative term which renders the claim indefinite. The term "tightly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is uncertain what clearance is being defined between the nozzle needle and the nozzle body. Claim 6 contains a similar recitation.

Claim Rejections - 35 USC § 102

4. Claims 1, 3, 6, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pataki et al. (5,899,389).

Pataki discloses a fuel injection valve comprising:

a nozzle body 108 having a nozzle body seat (seating surface for needle 104); and

a nozzle needle 104 incorporating a nozzle shaft (portion of needle 104 with diameter d1) and a nozzle needle seat (conical tip of needle 104), wherein the nozzle needle seat (conical tip of needle 104) comprises a sealing edge (downstream edge of surface 116) provided between an outer surface of a conical nozzle needle tip and a frusto-conical body section 116 of the nozzle needle;

a gap (gap between the body 108 and needle 104 in the section of the needle between surfaces 114 and 116)

5. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ushimura (4,470,548).

Ushimura discloses a fuel injection valve comprising: a nozzle body 14; a nozzle needle 12; conical nozzle needle tip 40; frusto-conical body section 36.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the ability/capability to operate in such a manner. The device of Ushimura has the

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capability to operate in such a manner because the gap of Ushimura traps/contains part of the fuel flow.

6. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzgrefe (4,982,901).

Holzgrefe discloses a fuel injection valve comprising: a nozzle body 15; a nozzle needle 6; conical nozzle needle tip 21, 23; frusto-conical body section 20.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the ability/capability to operate in such a manner. The device of Holzgrefe has the capability to operate in such a manner because the gap of Holzgrefe traps/contains part of the fuel flow.

7. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzgrefe et al. (5,012,981).

Holzgrefe discloses a fuel injection valve comprising: a nozzle body 15; a nozzle needle 6; conical nozzle needle tip 21, 23; frusto-conical body section 20.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the ability/capability to operate in such a manner. The device of Holzgrefe has the capability to operate in such a manner because the gap of Holzgrefe traps/contains part of the fuel flow.

Response to Arguments

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8. Applicant's arguments filed September 20, 2007 have been fully considered but they are not persuasive.

Applicant continues to argue that the Office action does not provide enough specificity to allow applicant to adequately respond to the rejections.

Claim 6: "a nozzle body having a nozzle body seat"

Pataki – see above and prior Office action

Ushimura – a nozzle body seat 22

'901 Holzgreffe – a nozzle body seat 17

'981 Holzgreffe – a nozzle body seat 17

Claim 6: "a nozzle needle tightly guided in the nozzle body and incorporating a nozzle needle shaft and a nozzle needle seat"

Pataki – a nozzle needle 104 tightly guided (see figure 4A) in the nozzle body 108 and incorporating a nozzle needle shaft (portion of needle 104 with diameter d1) and a nozzle needle seat (conical tip of needle 104)

Ushimura – a nozzle needle 12 tightly guided (inherent; column 2, lines 4-6) in the nozzle body 14 and incorporating a nozzle needle shaft (shaft of needle 12) and a nozzle needle seat 40

'901 Holzgreffe – a nozzle needle 6 tightly guided (30, 31) in the nozzle body 15 and incorporating a nozzle needle shaft (shaft of needle 6) and a nozzle needle seat 21

'981 Holzgreffe – a nozzle needle 6 tightly guided (30, 31) in the nozzle body 15 and incorporating a nozzle needle shaft (shaft of needle 6) and a nozzle needle seat 21

Claim 6: “a gap axially in height between the sealed seat and the nozzle needle shaft”

Ushimura – a gap (laterally of 38)

'901 Holzgreffe – a gap (below 20)

'981 Holzgreffe – a gap 42

Claim 6: “the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat”

The recitation “operable to...” now amended to “configured to...” is functional and merely requires the ability to so perform.

Applicant's argument regarding the recitation “directly adjacent” has been addressed in the prior Office action.

Applicant's argument regarding functional recitations have been addressed in the prior Office action. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571)

272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher S. Kim
Primary Examiner
Art Unit 3752

CK